APPENDIX C

FLOOD MAP MODERNIZATION BUSINESS PLANS

TABLE OF CONTENTS

INTRODUCTION

The business plan summaries included in this appendix are not comprehensive; rather, they focus primarily on plan components that relate to evaluation of mapping needs. A total of 55 state business plans updated in FY04 provided critical input to the sequencing of flood hazard update projects. In advance of this MHIP update, 30 states and CTPs submitted either FY05 business plans or revisions to their FY04 plans. A total of 25 mapping partners indicated that they had no changes to make to their FY04 plans. Summaries are included below for states and possessions that submitted FY05 business plans or revisions to FY04 business plans; those that did not submit new or revised information also are so indicated.

1.0 REGION 1

1.1 Connecticut

State of Connecticut Fiscal Year 2004 Map Modernization Business Plan, State of Connecticut Department of Environmental Protection, Inland Water Resources Division, Bureau of Water Management, July 2004.

Connecticut indicated that it had no changes to its 2004 business plan.

1.2 Maine

State of Maine Fiscal Year 2005 Map Modernization Business Plan, Maine State Planning Office, January 31, 2005.

Maine completed an initial mapping needs assessment and inventory of available digital base and topographic data. The evaluation of the information collected focused on those areas with the largest populations, the oldest maps, and the highest risk. Information was evaluated for each basin in the state and was translated into a county priority list, to conform to FEMA's performance measures. The highest-priority areas were those with high growth, high population densities, higher NFIP policy bases, and ability to leverage resources.

Information for the factors listed above was collected for each county. Counties were ordered according to each individual factor, with the lowest number denoting the highest score; as such, once each county's scores were totaled, the county with the lowest total sum was determined to have the highest mapping priority. All factors were given equal weight in the evaluation. The proposed sequencing list of project by fiscal year corresponds to the preliminary list generated in the evaluation of county characteristics in the first and last years of the program. For FY06 through FY-08, it appears that factors other than those listed above were considered in the proposed sequencing of projects.

The State indicates that several restudy projects will be incorporated into countywide studies slated as Flood Map Modernization progresses. For restudies in counties scheduled for project starts later in the Flood Map Modernization cycle, it may be possible to complete the technical review and DFIRM production prior to initiating a countywide study.

1.3 Massachusetts

Commonwealth of Massachusetts Map Modernization Business Plan, Department of Conservation and Recreation, Flood Hazard Management Program, July 2004.

Massachusetts indicated that it had no changes to its 2004 business plan.

1.4 New Hampshire

State of New Hampshire Flood Map Modernization Business Plan, July 30, 2004.

New Hampshire indicated that it had no changes to its 2004 business plan.

1.5 Rhode Island

State of Rhode Island Fiscal Year 2004 Map Modernization Business Plan, Rhode Island Emergency Management Agency, July 30, 2004.

Rhode Island indicated that it had no changes to its 2004 business plan.

1.6 Vermont

Vermont Multi-Hazard Map Modernization Business Plan, Vermont Agency of Natural Resources, Department of Environmental Conservation, Water Quality Division, July 2004.

Vermont indicated that it had no changes to its 2004 business plan.

2.0 REGION 2

2.1 New Jersey

Fiscal Year 2004 Map Modernization Business Plan, the State of New Jersey, April 30, 2004.

New Jersey indicated that it had no changes to its 2004 business plan.

2.2 New York

New York State Flood Mapping Program FY04 Business Plan, New York State Department of Environmental Conservation, May 10, 2004.

New York indicated that it had no changes to its 2004 business plan.

2.3 Puerto Rico

Commonwealth of Puerto Rico Map Modernization Business Plan Fiscal Years 2004-2009, Puerto Rico Planning Board, April 29, 2004 (Revised May 10, 2004; April 4, 2005).

Puerto Rico revised its business plan April 4, 2005 to reflect the fact that its DFIRM would be finalized and adopted April 19, 2005.

2.4 Virgin Islands

Fiscal Year 2004 Map Modernization Business Plan, U.S. Virgin Islands, April 30, 2004.

The U.S. Virgin Islands indicated that no changes to their 2004 business plan.

3.0 REGION 3

3.1 Delaware

Map Modernization Plan for Delaware (Draft), Department of Natural Resources and Environmental Control, State of Delaware.

The Delaware Department of Natural Resources and Environmental Control Division of Soil and Water indicated that it had no changes to its 2004 business plan.

3.2 District of Columbia

Multi-Hazard Flood Map Modernization Business Plan, Emergency Management Agency, District of Columbia Government, April 12, 2004.

The District of Columbia indicated that it had no changes to its 2004 business plan.

3.3 Maryland

Maryland Business Plan Revisions for Floodplain Mapping Modernization, Maryland Department of the Environment, Wetlands and Waterways Program, March 2005.

The Flood Map Modernization in Maryland – Business Plan describes current floodplain management programs and capabilities within the Maryland Department of the Environment, a history of flood hazard mitigation in the state, and a process for prioritizing counties for Flood Map Modernization. Counties with a large number of insurance policies or a large population receive higher priority in Maryland's mapping program. Based on the application of the FY 03 funding distribution factors, FEMA has determined that more than half of the counties in Maryland are high priority for Flood Map Modernization.

The plan contains a chart, broken down by fiscal year, which outlines when counties will be mapped. With the funds, the state intends to select a contractor(s) to perform mapping activities

such as topographic data development, and hydrologic and hydraulic analysis. An additional table broken down by fiscal year identifies how state capabilities will be improved with Community Assistance Program - Mitigation Assistance Program funding.

3.4 Pennsylvania

FY04 FEMA MMMS Business Plan, Governor's Center for Local Government Services, Department of Community and Economic Development, July 2004.

Pennsylvania indicated that it had no changes to its 2004 business plan.

3.5 Virginia

The Virginia Statewide Flood Map Modernization Business Plan, Division of Dam Safety and Floodplain Management, Department of Conservation and Recreation, March 31, 2004.

Virginia indicated that it had no changes to its 2004 business plan.

3.6 West Virginia

West Virginia Multi-Hazard Flood Map Modernization Plan (Draft), 2004.

West Virginia indicated that it had no change to its 2004 business plan.

4.0 Region 4

4.1 Alabama

Flood Map Modernization Program Business Plan, FY 2005 Update (Draft), State of Alabama Office of Water Resources, February 15, 2005.

The Alabama Office of Water Resources (OWR) has worked very closely with FEMA Region 4 on various aspects of floodplain management that are primarily associated with the NFIP. The OWR is excited to further enhance its floodplain management and state/Federal partnership by developing and implementing a Flood Map Modernization Program.

Alabama's 2005 plan lists all counties in the state with anticipated start dates. Priority was given to counties with greater population, need, and ability to leverage resources. The Alabama Flood Map Modernization Program (AFMMP) was developed with the same focus and objectives as the federal initiative. Detailed information regarding losses and claims is provided in the plan.

The state plan was based on an expected annual funding allocation in the 5-year program period. The plan was developed to provide some level of mapping for each county, based on the funding expected to be available, although additional funding was requested to improve the quality of the maps and the effectiveness of the program.

4.2 Florida

4.2.1 Northwest Florida Water Management District

FEMA Flood Map Modernization Program, 5-Year Business Plan, FY 2004-2009, Northwest Florida Water Management District, April 7, 2004; Draft Revision, February 14, 2005.

The focus of the Northwest Florida Water Management District's (NWFWMD) plan is to meet or exceed FEMA metrics for the population, with digital GIS flood data online, population with final adopted flood maps, leveraged effort toward digital GIS flood data, and additional funding through the state and/or local CTPs.

The business plan notes that, while meeting the FEMA metrics, it is structured with improvements to the Special Flood Hazard Areas (SFHAs) through modeling and floodplain delineation on better topographic data.

The NWFWMD's plan was based on funding allocation over the 5-year period. As developed, the plan provides some level of mapping for every county in the district, based on the funding level provided.

The NWFWMD vision for Flood Map Modernization is to develop a district-wide program providing more accurate and complete flood hazard information for counties and communities within the district. At the end of the process, all 16 counties will have updated DFIRMs that will incorporate new detailed studies, approximate studies, and/or updated base mapping. Updated DFIRMs and the district's ongoing emphasis on protection and acquisition of flood prone areas will lead to achievement of the district's flood protection goals and the non-structural floodplain management strategy. Program Management, to be performed by a contractor for the district, includes assisting with the evaluation of county mapping needs.

4.2.2 South Florida Water Management District

Flood Map Modernization Business Plan, South Florida Water Management District, Fiscal Years 2005-2009 (Draft), February 14, 2005.

The South Florida Water Management District's (SFWMD) plan seeks to meet or exceed FEMA metrics for population, with digital GIS flood data online, population with final adopted flood maps, leveraged effort toward digital GIS flood data, and funding through the state and/or local CTPs.

The district plan is based on allocation of funding during the 5-year period. The plan was developed to provide DFIRMs, datum conversions, Arc Hydro database and MIP interface development, program management, and an IT management system for every county in the District based on the funding level provided.

The SFWMD envisions partnering with FEMA to develop Arc Hydro databases that meet FEMA's data capture guidelines for all watersheds within the 16-county jurisdiction. This vision also includes the development of an IT system that will serve as a one-stop geospatial distributor of modeling data for all future project activities and will provide the necessary outreach to the public and private sector for implementation and acceptance of the activities.

4.2.3 Southwest Florida Water Management District

FEMA Map Modernization Program, Southwest Florida Water Management District Business Plan, FY2005-2009 (Draft), February 14, 2005.

The Southwest Florida Water Management District (SWFWM) plans to implement a process whereby it is able to meet, and possibly exceed, FEMA metrics in FY05-FY09 for population, with digital GIS flood data online, population with final adopted flood maps, along with leverage effort toward digital GIS flood data, and funding through the state and/or local CTPs.

The plan was based on allocation of funding during the 5-year period. The plan was developed to fund and modernize DFIRMs for the entire district through the district's Water Management Plan (WMP) and FEMA's Flood Map Modernization program by 2009.

Priority consideration is given to those projects designed to further the implementation of the district's WMP, appropriate Comprehensive Watershed Management (CWM) Plans, Surface Water Improvement and Management Plans, and Regional Water Supply Plan. Consideration also is given to the cooperator's efforts in developing, implementing, and enforcing water conservation and flood protection ordinances.

The implementation of the CWM Initiative through the WMP with all counties in the district lays the framework for watershed management and Flood Map Modernization. The district's vision includes full responsibility for the production and maintenance of the DFIRMs, hosting all DFIRM data, and eventually all aspects of floodplain mapping delegated to the district.

4.2.4 St. John's River Water Management District

The St. John's River Water Management District (SJRWMD) business plan was not completed in time for inclusion in this publication.

4.2.5 Suwannee River Water Management District

Suwanee River Water Management District FEMA Flood Map Modernization Program 5-Year Business Plan FY 2004-2009 (Draft Revision), February 14, 2005.

The focus of the Suwannee River Water Management District (SRWMD) plan is to meet or exceed FEMA metrics for population, with digital GIS flood data online, population with final adopted flood maps, along with leverage effort toward digital GIS flood data and funding through the state

and/or local CTPs. The plan notes that, while the FEMA metrics will be met, it is structured with some planned improvements to the Special Flood Hazard Areas through modeling and floodplain delineation using better topographic data.

The SRWMD's vision for Flood Map Modernization is to develop a district-wide program that provides more accurate and complete flood hazard information for the counties and communities within the district. At the end of the process, all 13 counties will have updated DFIRMs that will incorporate new detailed studies, approximate studies, and/or updated base mapping. Updated DFIRMs and the district's ongoing emphasis on protection and acquisition of flood-prone areas will lead to achievement of the district's flood protection goals and the non-structural floodplain management strategy. A part of the planned program management, to be performed by a contractor for the district, will be to assist with the evaluation of county mapping needs.

In addition to the funding requirements for the DFIRM projects, the district is requesting additional funding for Map Maintenance, development of an IT management system, and program management functions. The district intends to accomplish the 5-year Flood Map Modernization effort with its contractor and, as such, does not plan on assistance from the FEMA Region 4 IDIQ contractor or FEMA's NSP.

The district's plan was based on funding over the 5-year period. The plan was developed to ensure that DFIRMs are produced, adopted, and available on the district's Web site in the next 5 years.

4.3 Georgia

State of Georgia Flood Map Modernization Program Business Plan, Georgia Environmental Protection Division, Water Resources Branch, March 31, 2004; Revised 2005.

Georgia's program is initially focusing on mapping counties with the largest populations. Consideration will be given to other counties and communities based on population size, leverage available, and meeting FEMA's metrics. The state plan was based on allocation of funding throughout the 5-year period, and was developed to provide some level of mapping for every county in the state, based on the funding level provided. At the proposed level of funding published, the state would need more than $14 million more than the planned FEMA-allocated budget. Georgia is faced with the daunting challenge of producing DFIRMs for 159 counties. Because of the large number of counties in the State, this may be difficult to achieve. The State is working with FEMA in the pursuit of alternate sequencing, partnering opportunities and task evaluation methods to achieve statewide Flood Map Modernization.

4.4 Kentucky

Flood Map Modernization State Business Plan, Kentucky Division of Water, March 26, 2004 and 2005 update.

Kentucky is focusing its mapping program first on those counties and metropolitan areas with large populations. Subsequent factors considered in the evaluation of counties and communities reflected a watershed-based approach. Within watersheds, high-population counties and those with growing populations were sequenced first. Projects listed as FY04 priorities have additional information included in the plan regarding data and resources available for leveraging, as well as presence of existing or potential CTPs. It appears that these factors, in addition to population, were important in the identification of FY04 proposed projects.

The state plan was based on allocation of funding throughout the 5-year period. About 50 percent of the state's population is located in 15 counties, thus these counties are scheduled early in the mapping program, with the remaining counties sequenced according to their location within major watersheds.

Kentucky is coordinating with local authorities to determine county needs, resources, and floodplain mapping desires. This ongoing data collection process will help to refine the State's Flood Map Modernization planning and budgeting, as well as determine available leverage. Kentucky plans annual reviews of the business plan to incorporate lessons learned, refine budgetary and leverage estimates, and adjust map priorities as necessary. Kentucky plans to replace Zone As as appropriate with some detailed study (very limited, based on development), some limited detail, and approximate methods. The strategy is based on balancing the fulfillment of FEMA metrics with the gradual development of the state's capabilities to support a long-term floodplain management program.

4.5 Mississippi

Flood Map Modernization Initiative, FY04-FY08 Business Plan, 2005 Update, Mississippi Emergency Management Agency and Mississippi Department of Environmental Quality, February 14, 2005.

Mississippi has the fifth-largest floodplain in the United States, however, the available hazard information within the State is still very poor. The implementation of the FEMA Flood Map Modernization Program (FMMP) is focusing attention to the need for adequate and accurate maps. Mississippi is considering areas of high growth, high population densities, excessive repetitive loss claims, the NFIP policy base, and local resources available for leverage to determine FMMP project priorities. In 2004, the Mississippi legislature authorized $1 million in bond money to develop the state's clearinghouse for remote sensing and GIS data, sending a clear policy statement in support of developing DFIRMs in Mississippi.

4.6 North Carolina

Map Modernization Management Support, State of North Carolina Business Plan, FY05-09 (Draft Final), State of North Carolina Floodplain Mapping Program, February 14, 2005.

Rather than evaluating counties for mapping projects, North Carolina took a river basin approach. Those basins on the coast were of highest priority because of the impact of Hurricane Floyd and large populations. The State conducted scoping meetings and collected information on the needs for each basin. County-level information was compiled to create a mapping-needs profile for each basin. The state plan included an attachment with information for several factors, which were used to prioritize basins.

The six basins touching the coast were first funded in FY04, and work has progressed westward as funding is available. Currently well into phase II basins, North Carolina has produced 23 preliminary county maps and 13 effective county maps as of the end of FY04. Of interest is the impact from 2004 hurricanes in the western basins and the state's identification and proposed plan to shift some phase III western basins forward in their mapping plans to address these impacts.

4.7 South Carolina

2005 Flood Map Modernization Business Plan for South Carolina, State of South Carolina Department of Natural Resources, Land, Water, and Conservation Division, February 18, 2005.

The State of South Carolina determined priorities using a weighted factor system, applied to score each county. Those counties with the highest score were deemed to have the highest priority based on their risk, relative to other counties in the state. All counties were evaluated in this process, even those with studies underway.

The level of risk, as determined by the factors, was used to rate each county and to determine the type of study to be funded. Counties in the highest risk category will have complete restudies done; others will have limited detailed studies, digital conversions, or reduced digital conversions.

The highest-priority counties, those with high figures for each of the factors listed, are located on the coast. Coastal studies are of the highest priority in South Carolina, but were not scheduled to start in FY04 because the coastal study methodology is not yet available. Aside from the shuffling of project start years based on the availability of coastal study methodology, projects are scheduled to start according to priority. It is anticipated that the funding levels in each fiscal year will dictate the type of study that can be conducted in each county. South Carolina is tracking mapping needs remaining after completion of the Flood Map Modernization projects for future reference. The state plan also integrates other FEMA programs into a whole state approach to Flood Map Modernization and floodplain management to present overall NFIP practice in the state.

4.8 Tennessee

2005 Supplement to Tennessee Flood Map Modernization Business Case, Local Planning Assistance Office, Department of Economic and Community Development, State of Tennessee, February 14, 2005.

The Flood Map Modernization priority list included in Tennessee's 2004 state business plan was organized and prioritized according to county population. The priority list was amended in 2005 based on the availability of data from the Tennessee Base Mapping Program (TBMP).

Most important to Tennessee is improving the quality of risk identification. A mere conversion of the existing Flood Insurance Rate Maps (FIRM) to a digital format will result in more confusion and an increased potential for loss of life and property. The State expects the results of Flood Map Modernization to consist of DFIRMs utilizing data from the TBMP in all 95 counties.

Tennessee does not intend to promote the CTP program at the outset of Flood Map Modernization. The State prefers to use all funds available for the update of maps rather than developing a capacity at the local level to perform the mapping work

5.0 Region 5

5.1 Illinois

Illinois Business Plan for Flood Map Modernization, Illinois Department of Natural Resources, January 2005.

The State of Illinois intends to participate to the fullest extent possible in FEMA's Flood Map Modernization program. The State of Illinois would like to achieve the following goals: reduce or eliminate discrepancies in flood hazard mapping that cause inconsistent administration of federal, state, and local regulations; to foster better statewide watershed management; and to reduce or eliminate duplication of federal and state efforts in reviewing flood map revisions.

The Illinois DNR proposes to modernize flood maps over the next five years by accomplishing the following four tasks:

- Identify the best available digital base maps that meet FEMA standards.
- Convert Illinois flood hazard mapping to a digital, geo-database format (DFIRM2003).
- Help NFIP communities adopt new maps.
- Develop internal tracking to coordinate: state flood mitigation projects, new hydrology and hydraulic reviews for flood insurance studies, and applications for letters of map change.

The Illinois DNR believes the expansion of its in-house resources and utilization for Flood Map Modernization is the State's best option for meeting FEMA's five-year time frame. Illinois sees Phase I development activities as the most significant challenge to its program, which includes administration, scheduling, funding, and quality assurance. The State sees three main activities in Phase I – Flood Map Modernization; develop digital map data, develop digital base map inventory and convert FIRMs to DFIRMs. Currently, Phase II activities, which include map maintenance and

maintaining up-to-date data, are not clearly defined by FEMA, so the IDNR has not fully identified resources required to carry out these activities.

The IDNR had not planned on using any of the current funding to cover any new H&H data, and furthermore, believes funding is 50 percent less than the amount required for digital map conversion alone. The State also does not envision that the cost savings in the outlying years will be able to make up this shortfall in funding.

The Illinois DNR plans to develop digital base maps and flood hazard data for 67 percent of the State's population (17 counties) in two years and the entire state by the end of the fifth year.

5.2 Indiana

Indiana Floodplain Mapping Initiative, Indiana Department of Natural Resources, Division of Water, February 2005.

The Indiana DNR (INDNR) – Division of Water (DOW) completed the Indiana Floodplain Mapping Initiative, which is the State's plan to manage the production of floodplain mapping over the next four years and beyond. The DOW entered into an agreement with FEMA to become a CTP and currently has agreements in place to produce floodplain maps for 2005. By becoming a CTP, the State plans to achieve the following goals:

- Establish and maintain a premier data collection system.
- Achieve effective program management.
- Build and maintain mutually beneficial partnerships.
- Expand and better-inform the community.

The INDNR is initiating its state contractual process for the selection of contractors to assist the INDNR in the completion of the scope of services. The key factor in determining the scope of services in each case will be the amount of funding provided by FEMA for completing the new DFIRM. Once the contractors and funding are in place, then a complete scope of services can be compiled based on the following:

- A contract for services with the selected H & H consultant to perform or review floodplain modeling and/or redelineation.
- A work order with Prison Enterprises Network (PEN) for completion of the DFIRM panels and the accompanying geodatabase.
- A CTP agreement with FEMA for issuance of the grant and incorporating both of the tasks above.

The first phase of the floodplain digitization program, to digitize existing FIRMs, is completed for 83 counties, and is available to the public by accessing the Indiana DNR website. The data was digitally converted by PEN, at a huge cost savings to the State, and PEN will continue to be

utilized to the fullest extent possible, with the benefit of high quality floodplain mapping at reasonable costs.

As an additional grant by the Department of Homeland Security (DHS) in the spring of 2005, the State is being flown for detailed ortho-photography at a minimum of 1-foot pixel resolution. With additional funding for processing (no additional flights needed), data from these flights would meet FEMA's standards, and could then be used for floodplain mapping.

The Indiana Floodplain Mapping Initiative has well exceeded FEMA standards in three of four measurement categories, and will achieve the fourth by 2005.

Although the INDNR believes the planned funding is a good start in updating and revising current FIRMs and implementing FEMA's DFIRM standards, this amount of funding will only make a small dent in improving State floodplain mapping in order for the State to reach its optimal levels.

5.3 Michigan

Michigan's Multi-Hazard Flood Map Modernization Phase Business Plan, Land and Water Management Division, Michigan Department of Environmental Quality, February 2005.

Through the Flood Map Modernization program, the Michigan Department of Environmental Quality (MDEQ) seeks to reduce the loss of life and property, minimize the suffering and disruption caused by flooding, and better prepare the nation to address the consequences of flooding.

The State's overall program goals for supporting the Flood Map Modernization program are to:

- Reduce the average age of flood maps to 6 years.
- Produce digital flood hazard maps with up-to-date flood hazard data for the highest 15% priority areas in the state.
- Develop flood hazard maps for 50 percent of the unmapped, flood-prone communities in the state.

To fulfill its vision of the program, the MDEQ plans to: generally review the H&H for floodplain studies performed by others rather than conduct the studies; subcontract out for assistance in conducting and/or assisting in the collection of field data, modeling, and conducting and reviewing studies; provide technical assistance and staff resources to the program; and oversee and manage CTP projects and other agreements between FEMA and local agencies, communities, or consultants.

Current and future funding levels are less than the State's "Low Funding Alternative" in the State of Michigan's 2004 business plan. The State proposes the same activities and funding budget for year

two, but will need to proportionally reduce activities in subsequent years to cover cost-of-living salary increases for its staff.

5.4 Minnesota

Minnesota Map Modernization Business Plan 2005 Update, Minnesota Department of Natural Resources, DNR Waters, 2005.

The State of Minnesota will continue its mission of providing accurate, cost-effective digital county-wide floodplain maps that are usable to local officials, lending institutions, and insurance agents. The State also will focus on producing the maps using the newest, most accurate data available. The objectives of the business plan also remain the same.

Current FEMA funding levels are not adequate to update the flood delineation for most of the counties in the State. All of Minnesota's counties need updated flood delineation and some also need digital delineation of the FIRMs.

Minnesota added an additional priority to the sequencing of counties, those counties needing digital delineation. In order, the five priorities of the 2005 business plan are the completion of existing remapping projects, CTP counties, digital delineation of counties with no Q3 data, major watercourses and the counties around them, and the remapping of repetitive loss areas not in CTP counties.

Although the business plan adheres to FEMA's performance measures by funding year, the actual completion of maps and ordinance compliance has not met the plan performance goals. This is due to both delays in the completion of task orders and delays in funding allocation.

5.5 Ohio

Map Modernization Business Plan for the State of Ohio, 2005 Update (Draft), Ohio Department of Natural Resources Division of Water, February 2005.

Currently, in the State of Ohio, there are more than 35,000 flood insurance policies in effect for more than $3.8 billion in coverage. From a flood insurance standpoint, FIRMs play an important role in the writing, rating, and determining flood risk. In addition, in the State of Ohio, FIRMs are important to the 700 Ohio communities who have flood damage reduction regulations that prevent loss of life and property damage, and encourage sustainable community development.

To the State, it appears that two items will be accomplished through Flood Map Modernization – DFIRMs will be produced for all of the State's 88 counties and the DFIRMs will incorporate the best available topographic data. However, the State is concerned with the level of detail that the flood maps will provide.

Although the amount of funding from the November 2004 MHIP is significant, the State believes that, even with state and local leverage, it will have a difficult time achieving its vision for Flood Map Modernization.

The State of Ohio currently has no plans to be significantly involved in the storage and maintenance of the flood maps, nor does the MHIP address FEMA's vision for this phase of the program. Furthermore, the ODNR – Division of Water does not currently have the infrastructure or the resources to participate to any great extent.

The State of Ohio ultimately envisions that the Flood Map Modernization program will provide accurate and up-to-date flood maps, while providing outreach to the local communities to improve local floodplain management. Through new and innovative outreach activities, the State believes it can make significant progress in improving floodplain management overall; from more effective local regulations to better mapping and data systems.

5.6 Wisconsin

Fiscal Year 2005 Map Modernization Plan for the State of Wisconsin (Draft), Wisconsin Department of Natural Resources, December 15, 2004.

The State of Wisconsin, Department of Natural Resources (WDNR) has set a list of priorities for the Flood Map Modernization Program: ensure that flood hazards in areas with highest development pressure have up-to-date flood profiles and mapped floodways, ensure existing detailed studies match best available topographic data, conduct limited detail studies on all streams currently mapped as approximate, and develop floodplain maps on unmapped streams experiencing development pressure.

The WDNR has communicated with its counties the importance of improved topographic data, and has indicated that these counties will move up the State's mapping priority list.

The WDNR has three mapping goals it wishes to achieve within its incorporated areas:

- Conduct detailed studies for flood hazards in incorporated communities and high-growth areas.
- Perform limited detailed studies for flood hazards currently mapped with approximate methods.
- Complete limited detailed studies for presently unmapped flood hazards with development pressure.

Outside the State's incorporated areas, the WDNR has developed certain population density levels in order to warrant a detailed study.

The WDNR plans to participate in the program by accomplishing the following tasks: manage the program, conduct engineering reviews, DFIRM QA/QC as needed, utilize its prequalified consultants to perform floodplain modeling and mapping, initially focusing FEMA funds towards H&H and floodplain mapping, and continue its outreach effort to the communities

The State has updated its cost estimate to complete these tasks, and has concluded that the proposed funding for the State of Wisconsin will not be adequate in order to achieve its vision. To the fullest extent possible, the WDNR plans to conduct hydrologic modeling and engineering QA/QC with in-house, non-FEMA money.

6.0 REGION 6

6.1 Arkansas

State of Arkansas Flood Map Modernization Business Plan 2005 Update (Draft), Arkansas Soil and Water Conservation Commission, March 21, 2005.

The State of Arkansas plans to increase its role in Flood Map Modernization by forming a partnership between State agencies, local communities, and FEMA to maintain an inventory of available data such as elevation data, flood data, hydrological and hydraulic data, and study update needs. The State prefers to develop CTP agreements and Mapping Activity that will include topographic data development as well as base map acquisition and preparation. CTPs in the state of Arkansas are: 1) Pulaski County, 2) the City of Jonesboro (Craighead County), 3) the Northwest Arkansas Regional Planning Commission, and 4) the City of Arkadelphia (Clark County).

As an established partner, the Arkansas Floodplain Managers Association (AFMA) may be willing to help lobby Arkansas State lawmakers for Flood Map Modernization funding if conditions warrant such a request. AFMA may be willing to assist with education of the public relative to Flood Map Modernization and to promote the sharing of base mapping information with the Arkansas Geographic Information Office (AGIO). The State also will initiate mapping counties using detailed, limited detailed, and digital conversion for five counties.

Two Arkansas agencies, the Arkansas Soil and Water Conservation Commission (ASWCC) and the AGIO, will play key roles with Arkansas Flood Map Modernization. The ASWCC's primary activity will be updating and improving Arkansas' Map Modernization Business Plan. The AGIO's primary activity will be base map data collection.

The ASWCC will do the following:

- Update Annual State Business Plan
- Complete management activities relative Federal MMMS funds
- Assist with assessment of community mapping needs

- Provide outreach to communities

The AGIO will do the following:

- Collect digital base map data
- Share digital base map data
- Store digital base map data
- Attend Mapping project scoping meetings

Other Arkansas groups will provide base map data to the AGIO, who will, in turn, store and share this data with FEMA.

6.2 Louisiana

State Business Plan for Louisiana, Louisiana Department of Transportation and Development, April 19, 2004.

Louisiana indicated that it had no changes to its 2004 business plan.

6.3 New Mexico

State Business Plan for New Mexico, New Mexico Department of Public Safety/Office of Emergency Management, April 19, 2004.

New Mexico indicated that it had no changes to its 2004 business plan.

6.4 Oklahoma

State Business Plan for Oklahoma, Oklahoma Water Resources Board, April 19, 2004.

Oklahoma indicated that it had no changes to its 2004 business plan.

6.5 Texas

State Business Plan for Texas, Texas Commission on Environmental Quality, April 19, 2004.

Texas indicated that it had no changes to its 2004 business plan.

7.0 Region 7

7.1 Iowa

Iowa's Map Modernization Business Plan, Iowa Department of Natural Resources, Iowa Geological Survey, March 31, 2004.

Iowa indicated that it had no changes to its 2004 business plan.

7.2 Kansas

Statewide Map Modernization Plan for Kansas, Updated Final Report, Kansas Department of Agriculture, Division of Water Resources, March 2005.

The State of Kansas' vision is to maintain its current role as a CTP and to provide the best possible quality flood hazard maps for Kansans. The plan states that the Kansas Department of Agriculture (KDA) envisions maintaining the current activities throughout 2005 for conducting flood studies and outreach to communities.

The plan provides a list of nine counties that have had flood studies initiated under the KDA CTP program since its inception. The plan refers to the 2004 business plan for detailed discussion of Kansas' participation and its role in Flood Map Modernization. Kansas plans to facilitate local involvement in the flood mapping process and ultimately to increase the percentage of adopted maps at the completion of flood insurance studies. By working closely with local communities throughout the mapping process, Kansas hopes to reduce the number of appeals on the preliminary flood maps and ultimately increase the production and adoption of flood hazard maps.

Kansas provided an update on counties that have received updated maps since the 2004 business plan was written and provides figures illustrating which counties in Kansas currently have floodplain maps.

Kansas will meet 2005 performance metrics by completing ongoing studies or converting accurate existing flood hazard data to digital format. The leverage effort will include in-kind services and use of available base maps, topography, hydrologic studies, and hydraulic studies.

Kansas provides a history of prioritization efforts in 2003 and 2004 and explains that the 2005 priority list was based on one or more of the same factors from 2004 mapping priorities criteria. A list of prioritized counties is provided, along with a study status spreadsheet for tracking purposes.

7.3 Missouri

Missouri Multi-Hazard Flood Map Modernization Business Plan, Missouri State Emergency Management Agency, March 1, 2005.

The Missouri State Emergency Management Agency (SEMA) is an active participant in FEMA's CTP program, providing data and technical analyses for numerous countywide, approximate Zone A studies and has cultivated a highly successful cooperative arrangement with the U.S. Geological Survey. The plan describes the State of Missouri's overall objectives as well as the State's technical priorities based on the 5-year Flood Map Modernization Plan.

SEMA plans to build on previous Mapping Needs Assessment (MNA) efforts to complete MNAs for all counties in Missouri by FY07. In FY05, technical study work will not be completed by

SEMA, but it will continue to support studies initiated by FEMA or other Missouri CTPs by providing available topographic or other data and serving as a technical resource as issues arise.

SEMA provides a proposed 5-year schedule for flood insurance studies in Missouri based on the State's priorities, which are outlined in the business plan.

7.4 Nebraska

Flood Map Modernization Business Plan for Nebraska, Nebraska Department of Natural Resources, January 2005.

As an active CTP, the Nebraska Department of Natural Resources (NDNR) will continue to support FEMA's objectives for Flood Map Modernization. NDNR intends to increase outreach capabilities by hiring an additional staff member as funding becomes available. NDNR houses the state Data Bank which allows for teaming with other agencies to produce, archive, and share high-quality Digital Orthophoto Quarter Quadrangles (DOQQs) for use in floodplain mapping.

The Nebraska business plan is unclear of the methods used to establish mapping priorities in the State of Nebraska. NDNR states that approximately 20 counties per year will have to be completed in order to complete the mapping of the state during the initial 5-year Flood Map Modernization period. NDNR realizes that Federal funding will determine which counties are mapped, but says it is ready to act immediately upon receiving funding notification from FEMA.

To meet the goals of Flood Map Modernization for 2005 and beyond, Nebraska will ensure the success of any CTP project by requiring timely completion and submission of intermediate data, as well as final reports. Nebraska will track and complete primary performance measures corresponding to the major items of each Mapping Activity Statement. Nebraska will use the Management Information Portal (MIP) planned by FEMA for tracking Flood Map Modernization projects.

8.0 Region 8

8.1 Colorado

Proposed Map Modernization Studies, Colorado Water Conservation Board, March 4, 2004, revised February 23, 2005.

Colorado submitted revised, year-to-year information pertaining to the types of Flood Map Modernization studies that will be performed in various locations and cumulative statistics about how these studies will, by the end of FY07, affect 93.1 percent of the State's population.

8.2 Montana

Montana Multi-Hazard Flood Map Modernization State Business Plan 2004-2008, Montana Department of Natural Resources and the Conservation Water Resources Division, March 31, 2004.

Montana indicated that it had no changes to its 2004 business plan.

8.3 North Dakota

North Dakota Multi-Hazard Flood Map Modernization State Business Case Plan 2004-2008, North Dakota State Water Commission, January 31, 2004.

North Dakota indicated that it had no changes to its 2004 business plan.

8.4 South Dakota

Flood Map Modernization Business Plan for South Dakota, South Dakota Office of Emergency Management, January 1, 2004.

South Dakota indicated that it had no changes to its 2004 business plan.

8.5 Utah

The Map Modernization Program Business Case Plan for the State of Utah, Department of Public Safety, Division of Emergency Services, Floodplain Management Office, March 1, 2004.

Utah indicated that it had no changes to its 2004 business plan.

8.6 Wyoming

Wyoming Multi-Hazard Flood Map Modernization State Business Case Plan FY 2004-2008, Wyoming State Geological Survey, February 15, 2004.

Wyoming indicated that it had no changes to its 2004 business plan.

9.0 Region 9

9.1 Arizona

Map Modernization Plan for Arizona (DRAFT), FEMA/DHS Region 9, November 1, 2003.

Arizona's business plan was not completed in time for inclusion in this publication.

9.2 California

Flood Map Modernization State Business Plan, California Department of Water Resources, Floodplain Management Branch, June 23, 2004.

California indicated that it had no changes to its 2004 business plan

9.3 Hawaii

FY 2005 Map Modernization Management Support (MMMS) Business Plan (Draft), State of Hawaii Department of Land and Natural Resources, March 2005.

To date, the State of Hawaii, Department of Land and Natural Resources (DLNRI) has been unable to support Flood Map Modernization because of inadequate staffing resources at the State level and because the State has ongoing budgetary restrictions. As such, the DLNRI has been unable to assist in the identification and implementation of the State's mapping priorities. However, FEMA Region IX plans to allocate Map Modernization Management Support (MMMS) funds to the State in FY05-FY08, to allow the DLNRI to conduct non-mapping support tasks for Flood Map Modernization. In response, DLNRI prepared this plan to inform Region IX of proposed projects that it may undertake. These projects include, but are not limited to, the following:

- Providing minimal support activities, such as basic data to FEMA, the State's vision for Flood Map Modernization implementation, coordination with Region IX staff, and recognition of gaps and shortfalls
- Conducting a detailed community inventory of the base map data available for Flood Map Modernization and gathering these data for FEMA, when possible
- Conducting a detailed assessment of the mapping needs for each of the four Hawaii communities that participate in the NFIP
- Developing and maintaining an information technology system to archive, organize, distribute, and manage DFIRM data, and/or underlying backup data. Dependent upon funding, additional layers could be added that are not part of a DFIRM. Long-term plans would include an Intranet site where community floodplain managers can input permitting data for development in Special Flood Hazard Areas to streamline the Community Assistance Visit process.
- Developing and distributing outreach materials, such as an improved *Hawaii Flood Management Newsletter*, informational mailings such as brochures, and Web postings to promote the information technology system described above, so that the data could be accessible by the general public.
- Hiring additional State staff to support Flood Map Modernization

The plan identifies State benefits in relationship to Flood Map Modernization objectives for each of these potential projects and specifies performance metrics that can be used to measure the success of each project. The plan also identifies the combinations of projects that could be implemented, dependent on the funding provided by FEMA Region IX

9.4 Nevada

Nevada Map Modernization Management Support Business Plan - Fiscal Year 2005, Nevada Division of Water Resources, Floodplain Management Program, February 2005.

Current efforts by the Nevada Floodplain Management Program to support Flood Map Modernization have been limited to acting as a State-level point-of-contact to provide information about FEMA mapping activities in Nevada and to provide communication to FEMA Region IX and

its mapping contractors on mapping needs in Nevada. This communication was provided in the form of the *Nevada Flood Mapping Priorities, Phase 1 Mapping Needs Assessment* dated June 7, 2002, and completed MNUSS data worksheets. FEMA Region IX plans to allocate funding to the State in FY05-FY08 to allow the State to conduct additional non-mapping support tasks for Flood Map Modernization. In response, the Nevada Division of Water Resources prepared this plan to inform Region IX of two proposed activities that it may undertake:

- Developing the Nevada Flood History Database, which would provide historic flood data that is accessible to the general public via the Internet. The State proposes to subcontract through the existing NDWR/USGS Cooperative Studies Program with Nevada District of the U.S. Geological Survey, Water Resources Division, to develop database.
- Enhancing communication regarding flood mapping activities between FEMA Region IX, its mapping contractors, and Nevada communities by creating a Flood Mapping Coordinator position within the Nevada Floodplain Management Program.

The plan provides a project description, project justification/benefits, project plan, cost estimates and performance metrics for each activity. The plan also identifies the phases and scopes of each activity that could be implemented, depending on the quantity of funding provided by FEMA Region IX.

9.5 American Samoa

American Samoa did not submit a business plan.

9.6 Guam

Guam did not submit a business plan.

9.7 Northern Mariana Islands

The Northern Mariana Islands did not submit a business plan.

10.0 Region 10

10.1 Alaska

FY05 Alaska Business Plan Update, State of Alaska- Department of Commerce, Division of Community Advocacy, February 24, 2005.

The State of Alaska provided updated information regarding its state business plan for FY05. An updated project sequence, titled Alaska Study Needs Documentation of Leverage, reflects a shift of priorities to the State's most populated, flood-prone NFIP-participating boroughs and cities.

Ongoing activities for FY05 include providing aerial photo base maps for use in DFIRMs, continuing efforts to secure necessary permissions for FEMA use and distribution of base map data

in DFIRMs, and meetings with user groups and local communities to promote matching funds for base map development in rural areas. An outline of Mapping Activity Statements (MAS) being prepared for FY05 projects was included.

The business plan update recommends that the Fairbanks North Star Borough be given a high priority for study start in FY06 in recognition of its enrollment as a CTP. This elevation in priority is in line with the original state mapping plan

10.2 Idaho

Idaho Flood Map Modernization Statement of Work, FY2005 Funding Cycle, Idaho Department of Water Resources.

The Idaho business plan for FY05 describes five work tasks for which the State is spending its budget and effort. The work tasks included in the plan carry out the intentions outlined in the state's FY04 business plan to play a more substantial role in the Flood Map Modernization effort.

The five work tasks described include

- Creation and maintenance of a floodplain database on the IDWR website
- Expansion of IDWR's cooperative partnerships with FEMA and local governments by bringing six communities into the CTP program during FY05
- Expansion of outreach and public education by including workshops demonstrating ArcIMS for common users of NFIP data such as real estate professionals, land owners, engineers, developers, and the general public
- Coordination with FEMA and contractors for compliance and map adoption of digital maps for every county in Idaho
- Participation in training and coordination meetings with FEMA regional staff and the regional contractor and continued involvement with ASFPM and SHMO.

10.3 Oregon

Letter Regarding 2005 Update, Flood Map Modernization Business Plan for Oregon, Oregon Department of Land Conservation and Development, February 23, 2005.

The Oregon Department of Land Conservation and Development (DLCD) acts as the primary oversight and implementation organization. Although the DLCD is prepared to assist with Flood Map Modernization, the extent of the involvement ultimately depends on Federal funding and the Department's ability to maintain a stable funding/staffing balance. The DLCD is pursuing as part of its 2005-2007 budget the required legislative approvals for new positions and to continue to accept Flood Map Modernization grant dollars from FEMA.

Although DLCD has not yet secured internal staffing to assist with Flood Map Modernization, the Department has moved forward with Flood Map Modernization support activities via partnerships with other state-level organizations. DLCD has developed strong partnerships with the state's geographic information clearinghouse at the Department of Administrative Services and the Natural Hazards Workgroup at the University of Oregon to carry out many Flood Map Modernization support activities. DLCD anticipates that these key partnerships will continue even after internal staff is secured. DLCD has also coordinated with representatives of key local and state mapping partners via a Flood Map Modernization workgroup.

DLCD is working to implement Oregon's state support strategy through a combination of tasks including: building a comprehensive inventory of existing base map data and layers; building a community outreach strategy to address state and local issues and needs; conducting a community Mapping Needs Assessment (MNA); constructing a statewide information technology system to organize, distribute, and manage digital data and ultimately DFIRMs at the state-level; and building internal capacity to act as a long-term steward of a statewide floodplain layer. DLCD plans to pursue a CTP agreement with FEMA to support State efforts and hopes to facilitate CTP agreements between FEMA and other key State and local government agencies. DLCD also hopes to develop for FEMA a more definitive picture and understanding of potential state and local contributions to mapping projects. The Department also is considering how it can best support the scoping process and may assist with CCO meetings.

10.4 Washington

Map Modernization Business Plan – 2005, Washington State Department of Ecology, December 2004.

The State of Washington continues to fully perform management and CTP activities. Its role focuses on determining the mapping needs of the State; providing project scoping tasks and outreach activities; and performing restudies, digital conversions, and due process activities. The State continues to strive for statewide completion of digital products for every county with parallel objectives spotlighting the integration of new and improved data where inundation areas demonstrate the need for improvement. Although the State plans to provide map maintenance and data repository activities, details for how map maintenance will function remain a concern.

The State's Primary Resources include:

- Three regional floodplain specialists and one mapping coordinator with roughly 100 combined years of experience in floodplain management in Washington State including the NFIP, ordinance and policy expertise, information technology, geology and geography, and extensive knowledge of the State's flood-prone communities.

- A team of consultants that provides complete capacities in hydrologic and hydraulic engineering, digital data conversions, LIDAR technology, GIS and IT Systems Technology, and many years of experience with FEMA flood hazard mapping projects.
- Ongoing partnership development with several State and Federal agencies that provide resources on flood hazard reduction projects, multi-hazard data, engineering applications, mapping, and leveraging capabilities.
- Resources to perform several due process and outreach activities including scoping, workshops, interim and final meetings, web-based guidance materials, in-house technical and policy expertise, and extensive knowledge of the issues and concerns of Washington's NFIP communities.
- Washington's Flood Control Assistance Account Program. Washington's legislatively-established grants program that provides the State with funding dedicated to flood hazard reduction, comprehensive planning, and mapping.